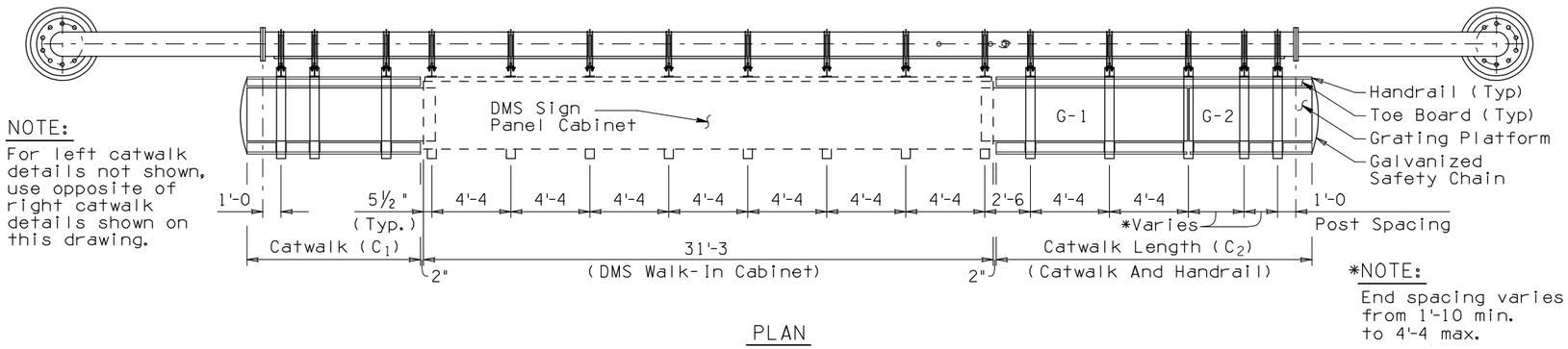
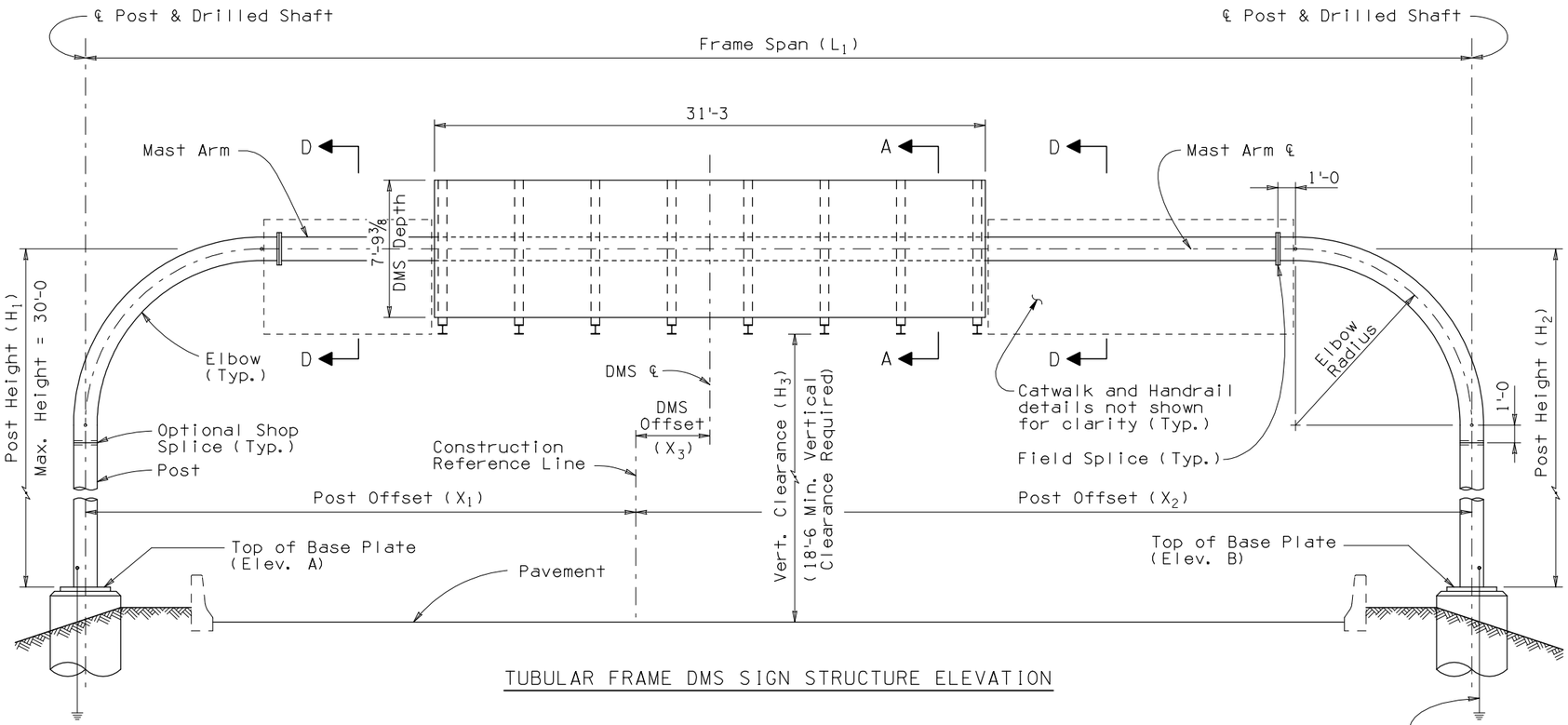


PLAN



TUBULAR FRAME DMS SIGN STRUCTURE ELEVATION

DMS CABINET DESCRIPTION:

Depth = 7'-9⅜ Length = 31'-3
Width = 3'-8½ Weight = 4500 lbs.

TUBULAR FRAME DATA FOR DMS CABINET SUPPORT						
TUBULAR FRAME				PIPE WALL THICKNESS (INCHES)		
Frame Type	Frame Span L_1	Nominal Pipe Dia.	90° Elbow Radius	Post	Elbow	Mast Arm
2F	56'-70'	16"	10'-0	1.219	1.219	0.500
3F	71'-110'	20"	12'-0	1.280	1.280	0.625
4F	111'-142'	22"	12'-0	1.125	1.125	0.875

Drilled shaft locations and top of drilled shaft elevations shall be field verified by the Contractor prior to fabrication of posts.

NOTE:
See SD 9.52 (2 of 5) for SECTION A-A.
See SD 9.52 (3 of 5) for SECTION D-D.
For General Notes see SD 9.20 (1 of 5).
For Foundation Details see SD 9.20 (2 of 5).
(Provide 9 inch diameter hole in center of column base plate to accommodate conduits).
For Frame and Handhole Details see SD 9.20 (3 of 5).
For Camber Diagram see SD 9.20 (3 of 5).
For DMS Camber Table see SD 9.52 (4 of 5).

OVERHEAD DMS NOTES:

Wind loading: 80 MPH Velocity.

Maximum Height: 50'-0 from average surrounding terain to the ℄ of mast arm and sign panel (Regardless of post height).

Maximum difference between post heights for an individual frame = 5'-0.

Additional sign attachment to the tubular frame is not allowed.

For Standard pipe mast arms with lengths greater than 60'-0, an optional field splice will be permitted at the third points of mast arm length to facilitate hauling operations.

The Optional Shop Splice may not be used when the splice location is less than 7'-0 above the top of base plate.

Drill and tap for 1½" chase nipples and plug with recessed pipe plugs. Place perpendicular to sign panel axis and away from approaching traffic. Install nipples on shoulder posts only.

Before any portion of the tubular frame is assembled in its final position, the Contractor shall demonstrate to the Engineer by preassembly or other approved methods that the span length of the frame in the no load condition is equal to (±½ inch) the field measured span length between foundations.

If the tubular frame is erected as one unit, the frame shall be adequately suspended during installation to avoid distortions or changes in span length between base plates.

The Field Splice surfaces shall be in full contact without gaps prior to the bolts being snug tightened and fully tensioned. The contact surface is the area defined by a 1⅜" radius around each bolt.

All tubular steel, plates, DMS sign supports, catwalks, bolts, nuts and washers shall be galvanized in accordance with General Notes.

Provide electrical grounding at pole foundations per ADOT Standard Specification Sect. 732-3.03.

NOTE:
Project drawings shall provide the following site specific DMS frame information on each DMS location sheet:

DMS FRAME SUMMARY TABLE	
DMS NO.:	VERTICAL CLEARANCE, H_3:
ROUTE:	TOP OF BASE PLATE, ELEV. A:
MILE POST:	TOP OF BASE PLATE, ELEV. B:
STATION:	POST OFFSET, X_1:
FRAME SPAN, L_1:	POST OFFSET, X_2:
HEIGHT, H_1:	DMS OFFSET, X_3:
HEIGHT, H_2:	CATWALK LENGTH, C_1:
	CATWALK LENGTH, C_2:

Note to Designer:
The information presented in this Standard Detail has been prepared in accordance with recognized engineering principles and is for general information only. It should not be used for specific application without competent professional examination and verification of its suitability and applicability by a licensed professional engineer. Contents within the inner border line shall not be altered.

NO	DESCRIPTION OF REVISIONS	MADE BY	DATE
1	Original Issue	SJH	05-07
2	. .	. .	. .
3	. .	. .	. .
4	. .	. .	. .

DESIGN APPROVED: Shafi U. Hasan

APPROVED FOR DISTRIBUTION: Jean A. Nehme

ARIZONA DEPARTMENT OF TRANSPORTATION
INTERMODAL TRANSPORTATION DIVISION
BRIDGE GROUP STRUCTURE DETAIL

DYNAMIC MESSAGE SIGN
TUBULAR FRAME
PLAN & ELEVATION

ROUTE	PROJECT NO.	FA NO.	DRAWING NO.
			SD 9.52 (1 of 5)
LOCATION			SHEET NO. OF